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| 10/619,882      | 07/15/2003  | David T. Jennings III | BRI/020             | 7471             |

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12/18/2003

Thomas J. Brindisi, Esq.  
Suite B.  
20 28th Place  
Venice, CA 90291

EXAMINER

BLACKNER, HENRY A.

ART UNIT

PAPER NUMBER

3941

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/619,882

Applicant(s)

JENNINGS III, DAVID T.

Examiner

Henry A. Blackner

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- IF NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.  
37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other

## DETAILED ACTION

### *Information Disclosure Statement*

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

1. CEN Document: prCEN/TS 13763-27 (NMP 898/FABERG N 0090 D/E) E 2002-06-19, paragraph 21, line 12.

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a) because they fail to show that pin 13 is grounded, figure 4, as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description. 18' (figure 2) and 21 (figure 3). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office

action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

The disclosure is objected to because of the following informality: In the phrase "flag indicates whether or not the device has been detected on the bus", paragraph 44 lines 4-5; suggest deleting the duplicate term "been", for clarity.

Appropriate correction is required.

### *Claim Objections*

Claims 2-19 are objected to because of the following informalities:

1. In regards to claims 2-19, the preamble "The device of claim", should read as "The *pyrotechnic* device of claim".
2. In regards to claim 4, the term "enclosure", line 2, was previously identified as a "*metallic* enclosure".
3. In regards to claims 6, 8, 14, and 15, the term "chip", line 1, was previously identified as an "*integrated circuit* chip".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Claims 13 and 16 recite the limitation "said chip" in line 1. There is insufficient antecedent basis for this limitation in the claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 6,166,452 to Adams.

In regards to claim 1, Adams clearly illustrates, a pyrotechnic device (10) comprising a ground, an igniter, electrical circuitry (25) connected to the igniter, and a ground connector connected to the electrical circuitry and to the ground, in figures 1-3, 5-7, and 10, column 2 lines 59-60 and lines 66-67, column 3 lines 1-6, lines 11-14, lines 22-31, lines 37-54, and lines 62-67, column 4 lines 1-12, lines 14-16, lines 19-37, lines 55-57, lines 59-61, and lines 64-67, column 5 lines 1-6, lines 13-18, and lines 24-67, and column 6 lines 1-14, lines 21-33, and lines 40-47.

In regards to claim 2, Adams clearly illustrates, wherein the device is an initiator, in the rejection of corresponding parts of claim 1, above.

In regards to claim 3, Adams clearly illustrates, that the device further comprises a metallic structure (45), in the rejection of corresponding parts of claim 1, above.

In regards to claim 4, Adams clearly illustrates, wherein the device is a detonator and the enclosure is a detonator shell, wherein the shell is the ground, in the rejection of corresponding parts of claim 1, above.

In regards to claims 5, 7, and 12, Adams clearly illustrates, wherein the electrical circuitry includes an integrated circuit chip (59), and the ground connector is connected to the chip, in the rejection of corresponding parts of claim 1, above.

In regards to claims 6, 8, and 13, Adams clearly illustrates, wherein the chip includes an ESD-protective structure, in the rejection of corresponding parts of claim 1, above.

In regards to claims 9 and 10, Adams clearly illustrates, that the device further comprises encapsulation surrounding at least part of the electrical circuitry, in the rejection of corresponding parts of claim 1, above.

In regards to claim 11, Adams inherently discloses, wherein the ground connector extends through the encapsulation, in the rejection of corresponding parts of claim 1, above.

In regards to claims 14-16, Adams clearly illustrates, wherein the chip includes a ground pin, and the ground connector is connected to the chip at the ground pin, in the rejection of corresponding parts of claim 1, above.

In regards to claim 17, Adams inherently discloses, wherein the ground connector is a simple metallic lead, in the rejection of corresponding parts of claim 1, above.

In regards to claim 18, Adams clearly illustrates, wherein the device is a detonator, in the rejection of corresponding parts of claim 1, above.

In regards to claim 19, Adams clearly illustrates, wherein the device is an automotive initiator, in the rejection of corresponding parts of claim 1, above.

In regards to claim 20, Adams clearly illustrates, an electronic detonator (10) comprising a metallic detonator shell (45), an igniter, electrical circuitry (25) connected to the igniter and including an integrated circuit chip (59) having an ESD-protective structure and a ground pin,

encapsulation surrounding at least part of the electrical circuitry, and a ground connector connected to the ground pin and to the detonator shell and extending through the encapsulation, wherein the ground connector is a simple metallic lead, in figures 1-3, 5-7, and 10, column 2 lines 59-60 and lines 66-67, column 3 lines 1-6, lines 11-14, lines 22-31, lines 37-54, and lines 62-67, column 4 lines 1-12, lines 14-16, lines 19-37, lines 55-57, lines 59-61, and lines 64-67, column 5 lines 1-6, lines 13-18, and lines 24-67, and column 6 lines 1-14, lines 21-33, and lines 40-47.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents show the state of the art in the field of ESD-Resistant Electronic Detonators.

U.S. Patent No. 6,618,237 B2 to Eddy et al.

U.S. Patent No. 6,584,907 B2 to Boucher et al.

U.S. Patent No. 6,571,712 B2 to Lebaudy et al.

U.S. Patent No. 6,467,414 B1 to Fisher

U.S. Patent No. 6,418,853 B1 to Duguet et al.

U.S. Patent No. 4,869,171 to Abouav

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry A. Blackner whose telephone number is 703-305-4799.

The examiner can normally be reached on 09:15 - 17:45.

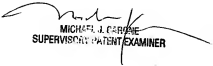
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.

hab  
10 December 2003



MICHAEL J. CARONE  
SUPERVISORY PATENT EXAMINER